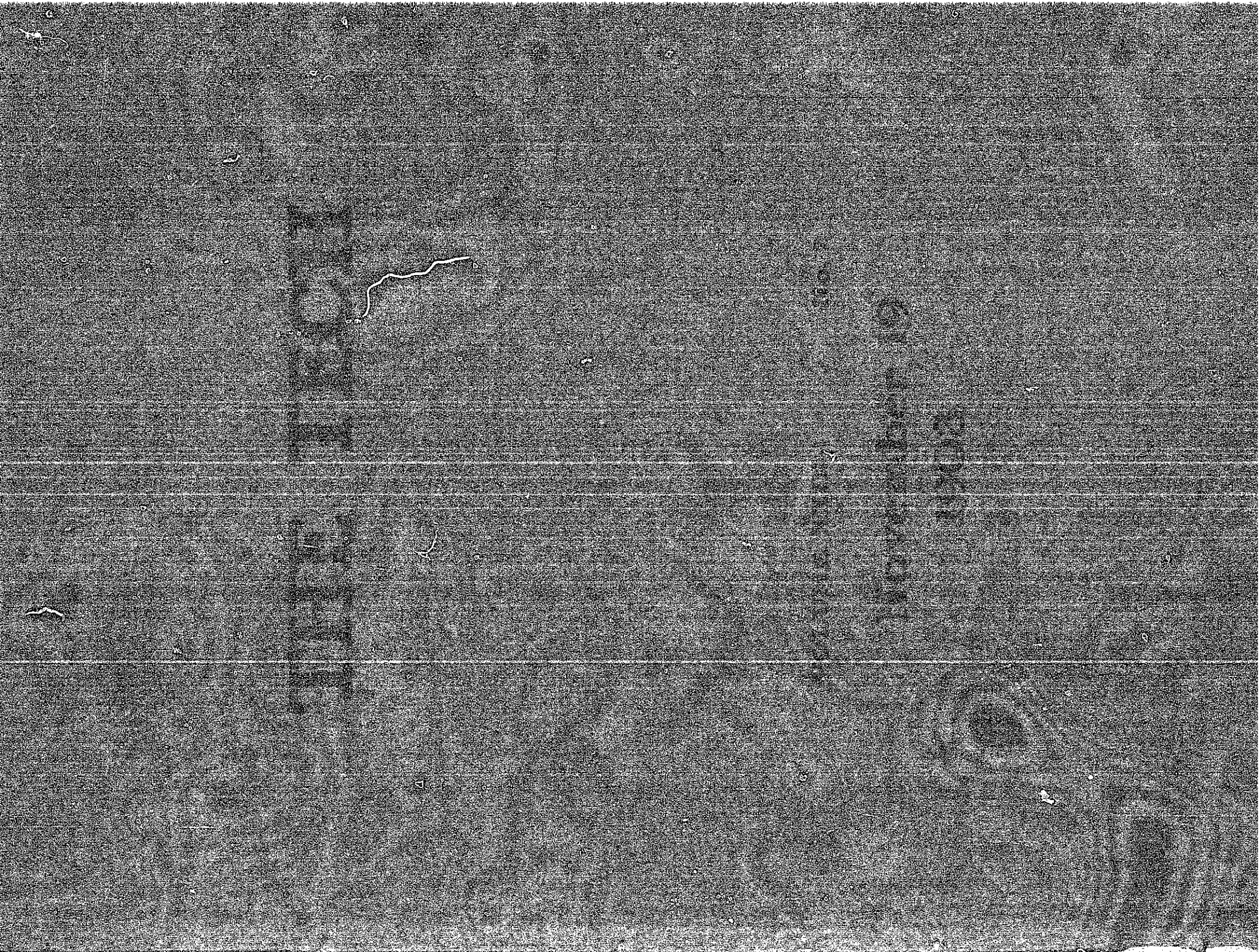

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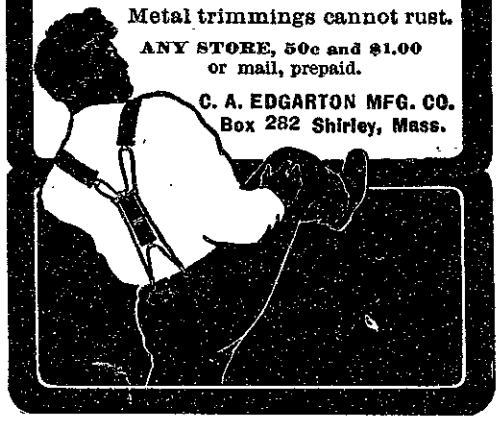

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THE TECH

VOL. XXIII. BOSTON, NOVEMBER 19, 1903. NO. 7.

THE TECH

Published every Thursday, during the college year, by students of the Massachusetts Institute of Technology.

GRAFTON B. PERKINS, 1905, *Editor-in-Chief.*
LEONARD T. BUSHNELL, 1905, *Managing Editor.*
H. EVERETT DARLING, 1906, *Secretary.*
WILLIAM GREEN, 1905.
J. DANIELS, 1905.
C. T. BARTLETT, 1906.
A. H. DONNEWALD, 1907.
C. H. GRAESSER, 1905, *Alumni Editor.*

MIGUEL AHUMADA, Jr., 1906, *Business Manager.*
H. L. MOODY, 1907, *Assistant Business Manager.*

OFFICE: 30 ROGERS, 491 BOYLSTON STREET.
Editor-in-Chief . . . . . daily, 8.30-9 A.M.
Business Manager . . . . . Monday, 12-1 P.M.

For the benefit of students THE TECH will be pleased to answer all questions and obtain all possible information pertaining to any department of the College.

Contributions are requested from all undergraduates, alumni, and officers of instruction. No anonymous manuscript can be accepted.

All communications with the Alumni Department should be addressed to the Alumni Editor.

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Puritan Press, Boston.

A REAL WELCOME.

NO man could have a more absolute welcome home than has President Pritchett. Every one of our sixteen hundred students is glad to have him with us again. Is every college president thus received? Perhaps so, but is there another college where this feeling would be as intense? Dr. Pritchett came among us and found us a big scientific school; we are now far on our way to be a big college. He has done it. No wonder we are glad to see him again! He has our confidence; if he says that a thing is good or bad for the undergraduate body, that body believes him; when he is here we know that everything is safe and right; he has treated us fairly and squarely; he never forgets that most of us are still young and he is in the highest degree attainable. Some men surround themselves with red tape and doorkeepers. There is no student in Tech who cannot reach Dr. Pritchett and tell him his woes with the perfect assurance that his case will be straightened out if such a thing is possible. This is not eulogy but the plain truth, and every Tech man knows it to be so. Yes, Dr. Pritchett is back and every one of us has had a friend return.

THIS SUITS US.

LAST week, although issued late, THE TECH was completely sold out, only enough copies being left by Friday noon to supply the holders of tickets, and many of the irregular purchasers were forced to go without the number. At last the undergraduates have begun to lend their support to the paper. This year has seen already a big growth in our sales, for our regular issue now is one thousand with twelve hundred on special numbers, against eight and nine hundred last year. Emphatically something has happened, and we hope it will not stop happening, since a well supported paper is a pleasure to run, while one which has to be forced on its readers is a different proposition. THE TECH is just what the students make it, and while it is the duty of the Board to put out, once a week, the best paper it can, little results without the full aid of the undergraduates.

TO FORESTALL COMPLAINTS.

IN a week or two complaints as to the limited capacity of the gym. will begin to be heard. Every one knows that the present building is quite unfit to accommodate the students and none realize it more fully than the powers that be. Complaints are useless; the gym. is overcrowded, uncomfortable and anything but ideal, yet nothing can be done. In the unsettled state in which the question of our future location has been left, the erection of a large modern gymnasium would be a foolish expense. The existing conditions must be put up with. If you are crowded, drop out and find some other means of exercise. The hour usually spent in more or less artificial exercises in a stuffy room can be spent in a brisk walk or a run which would give more real mental relaxation than could be hoped for in the gym. When you are displeased with the gymnasium quit and give your place to a man who is willing to stand the inconvenience, but don't kick.

THE MUSICAL CLUBS' PLAN.

THE plan of the Musical Clubs in regard to a series of concerts and dances is explained in detail on another page. Whether this scheme materializes or not depends fully on the support lent it by the students. Since the Clubs intend to charge only enough to cover expenses, they have no money-making project in view, but are doing it solely in the interest of all men at Tech. There is hardly any opportunity given us to meet our classmates on a social footing and these dances would thus fill a want. The Union was one step and an important one; now the undergraduates have a chance to help a less important, but nevertheless valuable one. Every time you meet your fellow students on an equal footing you gain something and they gain something; every chance you get to see another side of your neighbor's character pays you. From this standpoint the dances deserve success, but besides, most of us will go, not to gain sociological knowledge, but to have a good time, and we will not be disappointed.

THE CROSS COUNTRY WIN.

THE Cross Country men well earned their "T" Saturday. The works of many of them, Lorenz and Adams in particular, was of the best calibre and Tech is to be congratulated in having turned out a team which wins, and wins by a safe margin. The students at large did not appreciate the fact that fast men were running for them and that as pretty a race as could be desired was to result. Those who went out were satisfied, we are satisfied, the team is satisfied and all hands are satisfied. That race means lots of material for the intercollegiate meets in the spring. If we don't play football here, we can run.

Basket Ball.

Candidates for the team are notified that until further notice practice will be held Tuesdays and Thursdays at 4 o'clock at the gym. The schedule this year includes games with Holy Cross, Andover, and New Hampshire College, and games are being arranged with Yale, Dartmouth, Amherst, Brown, Boston University, Worcester Tech, and Cushing Academy. It is the intention of the management to secure a coach and do everything in their power to turn out a winning team. It depends upon the fellows to support the team by coming out for it, and also by subscribing to help pay the necessary expenses. Small subscriptions will be welcomed and any one desiring to contribute may leave his subscription at the "Cage" for F. W. Goldthwait, manager.

The Musical Clubs.

The Glee, Banjo and Mandolin Clubs have organized and have been hard at work for the past few weeks. A concert will be given to-night at Marblehead and the next one will be before the North Gate Club of West Newton on Nov. 23. The annual winter concert will probably be given in the New Century Building on the eighteenth of December, which is the Friday before the Christmas recess.

There has been some talk, this year, among the clubs of giving a series of short concerts followed by dances during the winter at prices to cover expenses. The object of this plan is to bring the clubs more before Tech men and also aid in bringing them together socially. This is a suggestion on the part of the clubs, and expressions of opinion are invited through THE TECH. In order that the plan may materialize, the management must be assured of its financial success.

As for the condition of the organizations, the Mandolin Club is especially good. A few more guitars are needed in the Banjo Club. The Glee Club is in a rather precarious condition, because it lacks first and second tenors. The men now singing are: 1st tenors, Swenson and Jackson; 2d tenors, Clark, Barrows, Higgins and Blount; 1st bass, Nicholas, Cook, Prentiss, Robbe and Gilbert; 2d bass, Fellows, Babcock, Killion, Blatt and Wilson. Clark, Cook, Nicholas, Babcock and Blatt were taken on this year. The Club is very fortunate in having Higgins and Blatt as soloists. A last call is made by the leader of the Glee Club for 1st and 2d tenors. They must be had immediately or the Club will have to assume the form of a double quartet. Tech has always made a favorable showing here and it is up to any man who can sing tenor to come out to rehearsals, which are held on Mondays, Wednesdays and Fridays from 1 to 1.30 P.M. at the Tech Union.

Electrical Engineering Society.

A meeting of the Electrical Engineering Society was held at Tech Union on the evening of Wednesday, Nov. 18, on which occasion a talk on "Steam Turbines" was given by Mr. Charles Garrison, the New England representative of the De Laval Company. Mr. Garrison discussed the theoretical considerations underlying the turbine principle. With various illustrations the advantage of the turbine in electrical engineering was conclusively shown. A 50-horsepower De Laval turbine was exhibited, and handbooks of this company's type of machine given to the members. After a discussion on the paper of the evening, light refreshments were served, and a general good time indulged in. It is the policy of the society to have at its meetings papers presented by distinguished engineers working in the various lines connected with electrical engineering. The Department of Electrical Engineering was well represented at the meeting. At a meeting in the near future it is hoped that President Pritchett will give some account of the Berlin-Zossen railroad.

Institute Committee.

A meeting of the Institute Committee was held last Thursday at 1 P.M., in the Trophy Room. The Honor System Committee reported on what had been done. It was voted that the regular meetings should be held on Thursdays at one o'clock. A movement was put on foot to have the Christmas vacation begin at a later date and extend over New Year's Day. This idea arose from the desire of many of the students to be at their homes on both of these holidays.

The following officers were elected for the ensuing year: President, W. E. Hadley, '04; vice-president, A. J. Amberg, '05; secretary and treasurer. E. M. Smith, '06.

Tech *vs.* Amherst.

The Cross Country run held with Amherst last Saturday resulted in an easy victory for Tech. The run was held at Franklin Park on a course of about four and three-quarters miles over a considerable variety of ground. Quite a number of men were out to encourage the team, and they were well paid for coming, as the race was especially satisfactory to a spectator.

The start was from a point on Pierpont Road and three laps were necessary to complete the course. Lorenz took the lead from the first and held it till the end, setting a great pace. The first lap, about a mile and a half, was run in eight minutes and fifty-seven seconds. The first three men, Lorenz, Adams and Chapman, were closely bunched after completing this lap. Then came Beam and Freeman of Amherst, Marcy of Tech, and three Amherst men. Major of Tech had sprained his ankle and was thus thrown behind, but kept going as well as was possible. After the second lap the order was about the same, except that Beam had worked into third place, getting ahead of Chapman. The runners were, however, strung out much more, Lorenz having a long lead. At the finish the order was: 1st, Lorenz; 2d, Adams; 3d, Beam; 4th, Chapman; 5th, Freeman; 6th, Marcy; 7th, Lewis; 8th, Thayer; 9th, Taylor; 10th, Major. Beam and Lewis both pushed the men in front of them closely, but even if they had passed these Tech men, the race would still have gone to Tech. Major deserves great credit for finishing at all, with his ankle sprained as it was.

The numbers of the places taken by each team were added up, the one with the smallest score winning. This gave Tech the race by a score of 23 to 32. The men comprising the team won their "T's." The time for the run, twenty-seven minutes, forty-two seconds, was excellent.

TEAMS.

TECH.	AMHERST.
E. H. Lorenz, '05 (Capt.)	H. E. Taylor, '04 (Capt.)
D. Adams, '05	C. W. Beam, '04
G. D. Marcy, '05	R. Freeman, '05
G. H. Chapman, '07	F. G. Thayer, '06
R. Major, '07	F. E. A. Lewis, '07

Summary: Score: Tech, 23, Amherst, 32. Distance: four and three-quarters miles. Time: Twenty-seven minutes, forty-two seconds. Referee: Dean Burton. Judges: Prof. Thomas E. Pope, H. S. Morse, '03, and J. M. Gammons, '03. Starter: F. B. Riley, '05. Timers: Coach Mahan, Tech, Coach Nelligan, Amherst, and C. R. Haynes, '04. Checkers: Manager Hamilton of Amherst, G. P. Palmer, '04. Marshals: R. E. Bell, '05, A. C. Dickerman, '05, B. L. Johnson, '05, H. J. Mann, '06, and J. W. Williams, Jr., '06.

Hydraulics, Courses II., III., VI., X. (op. 4), XIII.

The first exercise will be held Nov. 19 for options 3 and 4 of Course II., and Nov. 20 for all other classes.

Prepare Articles 11 and 15 in Merriman's "Treatise on Hydraulics" (edition of 1903), to be had at Damrell & Upham's, Bromfield Street.

Exercises will be held as per tabular view in the following rooms:

II. (ops. 1 and 2), X. (op. 4), XIII. Room 31, Eng. A.

II. (ops. 3 and 4), Room 21, Eng. A.

III., Room 26, Lowell.

VI., Room 53, Eng. A.

Freshman Battalion.

The following appointments are announced by the Headquarters of the Freshman Battalion:

Lieutenant and Adjutant, L. R. Fredenhall.

Company A: Lieutenants, E. D. Boles, A. Macomber; Sergeants, R. C. Ashenden, F. B. Barnard

J. C. Bradley, B. Nichols, L. S. Nordstrom; Corporal, E. H. Marsh.

Company B: Lieutenants, J. Mather, E. H. Packard; Sergeants, L. L. Allen, A. S. Black, E. G. Christy, W. P. Monahan, V. S. Rood; Corporal, F. V. Carey.

Company C: Lieutenants, F. S. McGregor, S. R. Very; Sergeants, A. F. Bancroft, B. F. Carter, J. A. Davis, E. C. Lee, J. H. McGarry; Corporal, G. L. Howe.

Company D: Lieutenants, E. H. Wing, H. S. Wonson; Sergeants, A. E. Hartwell, M. W. Sage, R. B. Sanders, J. H. Taylor, J. L. Walsh; Corporal, E. C. Story.

Calendar.

THURSDAY, NOV. 19.

4 P.M. BASKET BALL Practice at Gymnasium.

8 P.M. CONCERT of Musical Clubs at Marblehead.

8 P.M. M. I. T. 1902 CLASS MEETING at Union. Dr. Louis Duncan will talk on his "Engineering Experiences."

FRIDAY, NOV. 20.

1 P.M. MEETING MISSOURI CLUB in Trophy Room.

8 P.M. CHESS TEAM plays Boston Chess Club.

SATURDAY, NOV. 21.

1 P.M. FRESHMAN ELECTIONS. Polls close.

2.18 P.M. HARE AND HOUNDS meet at Back Bay Station for the run at West Roxbury.

6 P.M. REGULAR SATURDAY NIGHT DINNER at Union. Get tickets from Mr. Powers, twenty-five cents.

MONDAY, NOV. 23.

8 P.M. 1905 DINNER at the Union.

8 P.M. CONCERT Musical Clubs. North Gate Club, West Newton, Mass.

TUESDAY, NOV. 24.

4 P.M. BASKET BALL Practice at Gymnasium.

8 P.M. CHICAGO CLUB "SMOKER" at the Union.

WEDNESDAY, NOV. 25.

12 M. THANKSGIVING NUMBER OF THE TECH. On sale in Rogers Corridor.

THURSDAY, NOV. 26.

THANKSGIVING RECESS.

Freshman Orchestra.

The Freshman Orchestra, an outgrowth of the Freshman dinner, given early in the year, is now well under way. Considering the short time it has been in existence the progress of the orchestra is excellent. Rehearsals have been held twice a week and at a public trial in the Children's Theatre the music was commented on very favorably. More wind instruments and drums would add much to the effect, and any Freshman who can play either should come out and help make this undertaking a success.

Freshman Nominations.

For President, Stuart R. Miller, George W. Otis, C. H. Loutrel.

For Vice-President, Alexander Macomber, Ralph H. Hudson, Harry J. Sargent.

For Secretary, Nathan A. Middleton, Earl H. Barber, James H. Mulcare.

For Treasurer, George A. Griffin, Gardiner S. Gould, George H. Chapman.

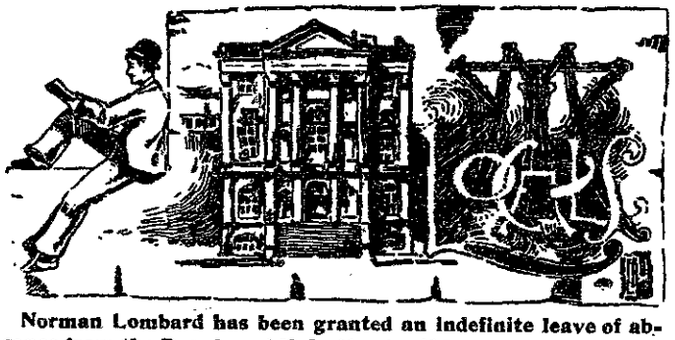
For Board of Directors, George A. Griffin, Horace S. Holt, Erskine P. Noyes, Orrin W. Potter, Stephen K. Poole, Harold S. Wonson.

Polls close Saturday, Nov. 21, at 1 P.M.

Letters at "Cage."

The following men should call at the "Cage" for old letters:

R. O. Adams, H. M. Brown, J. Blatz, S. R. Bell, F. C. Bickford, J. P. Bulkley, B. Beeman, T. M. Brown, E. A. Cooper, F. C. Durant, E. Fowler, W. H. Foster, O. Faelton, R. C. Grovenor, E. Graham, A. F. Hall, W. H. Hardy, E. R. Humphrey, E. B. Hill, K. P. Henigan, Harry Higgins, W. H. Haskins, C. A. Hardy, R. F. Jackson, F. Lord, W. J. Lumbert, P. H. Langworthy, H. MacDonald, A. S. Martin, W. G. Merriam, L. F. O'Neil, P. Potter, A. J. Payne, D. W. C. Ruff, C. C. Reed, E. F. Searle, T. Sammins, H. G. Simpson, A. D. Smith, W. Smith, E. J. Tully, W. W. Walker, F. B. Watson, F. S. White, O. M. Ward, B. F. Whittaker, H. S. Whiting, D. Hine, R. T. Congdon, T. Sillber, C. B. Covy, G. H. R. Preble, F. S. Anderson, R. W. Eaton, C. B. Cox, C. H. Porter, T. L. Smith, V. M. Palmer.



Norman Lombard has been granted an indefinite leave of absence from the Board, and H. L. Moody, '07, was elected Assistant Business Manager.

There will be a Union dinner on Saturday.

Ballots for 1907 elections must be in by Saturday, Nov. 21 at 1 P.M.

The Freshmen Orchestra has elected A. T. Kolatschevski leader, and H. L. Moody manager.

THE TECH wishes to emphasize the fact that no unsigned communications can be published.

The Thanksgiving recess is of one day only, thus allowing a week's vacation at Christmas.

All men trying for the Basket Ball Team should report at the gym., Tuesdays and Thursdays at 4 P.M.

Harvard '07-0, M. I. T. '06-0; Harvard '07-17, Yale '07-6. This makes pleasant reading for a school which doesn't enter into athletics.

It is planned to issue the Thanksgiving TECH on Wednesday, so all copy should be in by Saturday morning. Calendar notices only can be accepted Monday.

Mrs. Pritchett held the first of her afternoons for students last Saturday. Each Tuesday and Saturday she is at home to Tech students from five to half past six at her home at 147 Bay State Road. Many men are kept away from these little functions by dread of formality; this is quite unfounded. Mrs. Prichett has a sincere desire to meet and know the students and spares no effort to make each visitor feel at home.

The Chess Club.

The Chess Club was to have played a match with the Boston Chess Club last Friday, but owing to a difficulty in collecting the latter team, the match has been postponed for one week.

In order not to disappoint the Tech players, Mr. Walcott, the champion of the Club, played about fourteen games, ten of which were with Tech players. The only games lost by Mr. Walcott were those with Lourie, Crowell and Upham. The playing of the Tech Club is becoming much better than it has been, more careful work being devoted to the scientific side of the game. The Harvard Club has been trying to get a match, and it is expected that one will be held if a favorable date can be settled upon. The men constituting the temporary M. I. T. team are: Lourie, Schlemm, Edmunds, Hill, Morey, Helpern, Merrian and Lord.

A Sound Mind in a Sound Body.

The subject of physical training is altogether too practical and important to have long escaped the notice of civilized nations. Like all activities of man, it has been popular at those times when conditions of life have made it necessary. In former times systematic physical training has been used mainly as a preparation for the physical struggle for existence. To-day the importance of muscular strength alone has greatly diminished, while the importance of mental power has correspondingly increased. Nevertheless, physical training is as important as ever as a preparation for the mental struggle for existence. It has been proved by psychologists that mind and body stand together in the closest relationship, and that excellent physical development is necessary for the highest mental development.

A mere glance at the history of education will suffice to show that those nations which

have attained the highest intellectual development have been those which have systematically trained the body. The Greeks, who were the highest types of men, both mentally and physically, that have ever existed, made physical training an important part of their education. The Romans, likewise noted for their high intellectual attainments, as well as for their prowess in war, considered athletics an essential part of education. In the Middle Ages hunting, war and the spirit of chivalry secured a superior physical development among the nobility, while manual labor kept up the muscular strength and health of the masses.

With the closing years of the nineteenth century came a very marked increase in the popularity of physical training and out-of-door sports. The marvelous development of baseball, football, tennis, golf and numerous other sports indicate a widespread interest in open air exercise. The annual rush to health resorts shows that the public realizes the necessity of caring for the body. The expenditure of millions of dollars each year on gymnasiums by our institutions of learning tends to show that the present popularity of physical training is no fad, but has penetrated the very depths of society.

To trace the cause of this reaction one has only to look at the great social and economic changes which have come about during the last century. A hundred years ago less than 4 per cent of the population of the United States lived in cities, while the rest lived in rural districts where everything was conducive to health and strength. At the present time over 60 per cent of the population of the United States live in cities, where the conditions as regards the maintenance of health and strength are quite the opposite of those in the country. Another change has also taken place, which, if there were no other reason, is sufficient to make physical training necessary, especially for those engaged in intellectual pursuits. A century ago almost everything was done by manual labor, but now steam and electricity have taken the place of muscle. Transportation and communication is very rapid — in fact, all business is carried on at a whirlwind rate. As a result of all this a greater demand is made of the brain, and nervous expenditure is greatly increased. As one writer has said, "consciousness is intense." There has been a radical change from muscular activity, which is conducive to health, to psychic activity at the expense of health. Thus it is easy to see that the rapid increase in the popularity of physical training and out-of-door sports is due to no "passing whim or fancy," but rather to a profound realization of a great need. The public has begun to realize that the enervating effect of a life spent in intellectual pursuits must be counteracted by some form of physical training. The leading educators of the day have begun to see that students need some form of systematized physical training in connection with their mental work, not only as a form of recreation, but also as a preparation for the sterner responsibilities of life itself.

The object of physical training in our schools is primarily to develop a firm, healthy body, strong muscle, and pure blood. Spinal curvature, stooped shoulders and flat chests are some of the many evils which it will prevent. In systematic exercise every function of the body is engaged. The circulation of the blood is quickened, and the brain is relieved from the congestive tendency caused by a prolonged mental strain. More oxygen is inhaled, and the impurities and waste matter of the body are quickly burned up and destroyed. The appetite is increased and the digestive organs are put in a much better state. Physical exercise not only acts immediately upon the state of the body and renews its forces, but it also tempers the nervous system and gives the mind more vigor. These

are some of the direct benefits to be derived from systematic bodily exercise, while the indirect benefits, such as making the brain capable of more intense mental strain, are fully as important.

In this age, when great success can only be obtained by the development of the higher faculties, perhaps the class of people which most needs systematic physical training is the student class. Physical training and mental training should go hand in hand, since they are complements of each other. This is the age of the survival of the fittest just as truly as it ever was, the only difference being that the struggle is a mental one. For every position in life there is great competition, therefore a student should come to the struggle of actual life as well prepared as possible.

A student's life is biologically abnormal. He does much of his work in a sitting posture, with the chest, as a rule, contracted. This position, coupled with intense mental activity, restricts circulation, respiration, and assimilation, yet the cause cannot be well removed, for it is necessary. Something, therefore, must be done to neutralize the effect, and the only thing that will do it is physical training. This counteracts the enervating influence of student and city life, and stores up energy for the future. Students, especially those who need it most, are too apt to underestimate this fact, and they do not readily accept a condition which has come to stay and will only be changed by being increased.

The chief aim of many students in the secondary schools who intend to go to college, is to fit themselves for the entrance examination. It looms up before them as a big, high wall, and they direct all their energies in their attempt to scale it, even at the sacrifice of many other necessary things. As a result, many injure their health and are not able to fulfill the harder conditions of college life as they should. Nevertheless, they work on at the expense of their health, and see before them, over the numerous smaller peaks, only a lofty and almost unsurmountable eminence in the shape of the final examination. They regard this as an end in life, rather than as a means to an end. They should look beyond the final examination and see life itself, with all of its stern realities. They would then see a struggle for supremacy of mind. If students would do this intelligently, they would come to realize the necessity of training themselves both mentally and physically for life's responsibilities.

What is education anyway? What is its object and where does it end? Is it the mere acquisition of facts? Is its object social position? Does it end with the college diploma? No, it is more than all these things, It is "the systematic training of an individual in order to develop to the highest degree his possibilities for good." Its object is to improve the world as a whole, and it never stops short of the grave. This being so, every student should aim to educate both mind and body to the highest degree possible, and endeavor to become a complete unit of the nation in which he lives.

Summing up these few brief facts, it is not difficult to see that higher education is worth but little if it is obtained at the price of health. In other words, health is too much to pay for the highest intellectual attainments. Success in life is not obtained through the mere knowledge we get from books. It is only obtained by those who are capable of intense and prolonged mental effort, and these are related primarily to health and stored-up energy. The world wants a man of action, one who constantly lives at his best; and in order to attain this ideal the student should take systematic bodily training during his growing period.

It is not necessary to neglect the mental training in order to take the physical, but students should not entirely overlook the latter. A few hours spent in a gymnasium will never be regretted; its hygienic effects are both immediate and lasting. Every student should recognize the fact that a sound mind exists in a sound body, and should aim, therefore, to develop himself physically as well as mentally to the highest possible degree.

W. C. Towne, A.B.